

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) A continuous process for preparing caprolactam by Beckmann rearrangement of cyclohexanone oxime, said process comprising
 - a) feeding (i) oleum and (ii) cyclohexanone oxime into a first reaction mixture comprising caprolactam, sulfuric acid and SO₃,
 - b) feeding (iii) a portion of the first reaction mixture and (iv) cyclohexanone oxime into a second reaction mixture comprising caprolactam, sulfuric acid and SO₃,
 - c) withdrawing a portion of the second reaction mixture, wherein the process further comprises obtaining the cyclohexanone oxime that is fed to the reaction mixtures by:
 - 1) preparing an organic medium comprising cyclohexanone oxime dissolved in an organic solvent
 - 2) separating, by distillation, cyclohexanone oxime from said organic medium.
2. (original) A process according to claim 1, said process further comprising
 - d) feeding (v) a portion of the second reaction mixture and (vi) cyclohexanone oxime into a third reaction mixture comprising caprolactam, sulfuric acid and SO₃, and
 - e) withdrawing a portion of the third reaction mixture.
3. (currently amended) Process according to ~~any one of claims 1-2~~ claim 1, wherein the cyclohexanone oxime that is fed to the reaction mixtures contains less than 1 wt.% water.

4. (currently amended) Process according to ~~any one of claims 1-2~~ claim 1, wherein the cyclohexanone oxime that is fed to the reaction mixtures contains less than 0.1 wt.% water.

5. (currently amended) Process according to ~~any one of claims 1-4~~ claim 1, wherein the SO₃ content of the reaction mixtures comprising caprolactam, sulfuric acid and SO₃ is at least 6 wt.%.

6. (currently amended) Process according to ~~any one of claims 1-4~~ claim 1, wherein the SO₃ content of the reaction mixtures comprising caprolactam, sulfuric acid and SO₃ is at least 8 wt.%.

7. (currently amended) Process according to ~~any one of claims 1-4~~ claim 1, wherein the SO₃ content of the reaction mixtures comprising caprolactam, sulfuric acid and SO₃ is at least 10 wt.%.

8. (currently amended) Process according to ~~any one of claims 1-7~~ claim 1, wherein the SO₃ content of the oleum is between 18 and 35 wt.%.

9. (currently amended) Process according to ~~any one of claims 1-4~~ claim 1, wherein the process comprising

a) feeding (i) oleum and (ii) cyclohexanone oxime into a first reaction mixture comprising caprolactam, sulfuric acid and SO₃,

b) feeding (iii) a portion of the first reaction mixture and (iv) cyclohexanone oxime into a second reaction mixture comprising caprolactam, sulfuric acid and SO₃, wherein the molar ratio M of the second reaction mixture is between 1.0 and 1.4 and the SO₃ content of the second reaction mixture is higher than 6 wt.%,

c) withdrawing a portion of the second reaction mixture from which caprolactam is recovered.

10. (original) Process according to claim 9, wherein the SO₃ content of the second reaction mixture is higher than 8 wt.%.

11. (original) Process according to claim 9, wherein the SO₃ content of the second reaction mixture is higher than 10 wt.%.

12. (currently amended) Process according to ~~any one of claims 1-4~~ claim 1, wherein the process comprising

a) feeding (i) oleum and (ii) cyclohexanone oxime into a first reaction mixture comprising caprolactam, sulfuric acid and SO₃,

b) feeding (iii) a portion of the first reaction mixture and (iv) cyclohexanone oxime into a second reaction mixture comprising caprolactam, sulfuric acid and SO₃,

c) withdrawing a portion of the second reaction mixture;

d) feeding (v) a portion of the second reaction mixture and (vi) cyclohexanone oxime into a third reaction mixture comprising caprolactam, sulfuric acid and SO₃, wherein the molar ratio M of the third reaction mixture is between 1.0 and 1.4 and the SO₃ content of the third reaction mixture is higher than 6 wt.%,

e) withdrawing a portion of the third reaction mixture from which caprolactam is recovered.

13. (original) Process according to claim 12, wherein the SO₃ content of the third reaction mixture is higher than 8 wt.%.

14. (original) Process according to claim 12, wherein the SO₃ content of the third reaction mixture is higher than 10 wt.%.